

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

- 1 1. (Currently amended) A spread spectrum radio frequency communication system
2 comprising:
3 an exciter to provide a plurality of carrier signals grouped into a plurality of subbands;
4 a Forward Error Correction (FEC) encoder to encode digital data to provide a plurality of
5 symbol blocks, each one of the plurality of symbol blocks having a plurality of symbols;
6 an interleaver to map each symbol of one of the plurality of symbol blocks into a
7 different one of the plurality of subbands; [and]
8 a Walsh subband encoder to encode each symbol within each one of the plurality of
9 subbands; and
10 an Inverse Fast Fourier Transform (IFFT) to perform an inverse fast Fourier transform
11 operation on each one of the subband symbols.
- 1 2. (Previously amended) The communication system as recited in Claim 1 wherein the FEC
2 encoder uses a Reed Solomon FEC code.
- 1 3. (Previously amended) The communication system as recited in Claim 1 wherein the FEC
2 encoder uses a Turbo Code FEC code.
- 1 4. (Previously amended) The communication system as recited in Claim 1 wherein the FEC
2 encoder uses a convolution FEC code.
- 1 5. (Previously amended) The communication system as recited in Claim 1 comprising a
2 transmission security device to encrypt each one of the Walsh encoded symbol sets.
6. (Canceled)

- 7. (Canceled)
- 8. (Canceled)
- 9. (Canceled)

10. (Currently amended) A method of providing a spread spectrum radio frequency communication signal comprising the steps of:

- forming a stream of data into a plurality of data packets;
- embedding each data packet into a physical layer packet comprising the steps of adding a packet header, performing a cyclic redundancy check and encoding the data;
- the encoding the data step comprising the steps of:
 - encoding baseband data with a Reed Solomon forward error correction algorithm to provide symbol blocks, each symbol block having a plurality of symbols; and
 - interleaving each symbol of one of the symbol blocks across a plurality of coherent subbands wherein each symbol from each one of the symbol blocks is mapped to a different one of the plurality of coherent subbands; [and]
 - subband-encoding each coherent subband with a low rate Walsh code; and
 - performing an inverse fast Fourier transform operation on each one of the subband symbols.

11. (Canceled)

12. (Currently amended) The system as recited in claim 13 further comprising:

- a transmission security device, coupled to the Inverse Fast Fourier Transform, to encrypt each one of the Walsh encoded symbol groups; and
- an Inverse Fast Fourier Transform (IFFT) coupled to the transmission security device].

13. (Currently amended) A spread spectrum radio frequency communication system comprising:

3 a Forward Error Correction (FEC) encoder to encode digital data to provide a plurality of
4 symbol groups, each one of the plurality of symbol groups have a plurality of symbols, the FEC
5 encoder using a Reed Solomon FEC code;

6 an interleaver to map each one of the plurality of symbols from each one of the plurality
7 of symbol groups into a corresponding different one of a plurality of coherent subbands;

8 a Walsh subband-encoder to encode each one of the plurality of frequency subbands;

9 [and]

10 a subband filter to excise a frequency subband to prevent co-site interference with
11 another radio system; and

12 an Inverse Fast Fourier Transform (IFFT) to perform an inverse fast Fourier transform
13 operation on each one of the plurality of subband symbols.

1 14. (Original) The system as recited in claim 13 further comprising a corresponding
2 receiver having a subband filter to excise the corresponding frequency subband as in the
3 transmitter.

1 15. (Original) The system as recited in claim 14 wherein both the transmitter and
2 receiver perform different subband mapping that avoids mapping symbols into excised subbands.